

REMARKS

In the Office Action, claims 1-43 were rejected. By the present Response, claim 14 is amended and claim 15 is canceled. Upon entry of the amendments, claims 1-14 and 16-43 will remain pending in the present patent application. Reconsideration and allowance of all pending claims are requested.

Rejections Under 35 U.S.C. § 103

The Office Action summarized claims 1-7, 14-20, 22-28 and 35-43 as rejected under 35 U.S.C. §103(a) as being unpatentable over Melink (U.S. Patent No. 6,170,480) in view of Bowen (U.S. Patent No. 4,146,016) further in view of Morton (U.S. Patent No. 6,349,716). Rejected claims 1, 14, 22 and 35 are independent and will be discussed in detail below.

Further, claims 8, 9, 11-13, 21, 29, 30 and 32-34 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Melink in view Bowen, further in view of Morton and further in view of Wang et al. (U.S. Patent No. 5,236,595, hereinafter "Wang").

By the present response independent claim 14 has been amended and claim 15 has been canceled. Independent claims 1, 14, 22 and 35 and the claims depending therefrom are believed to be patentable for the reasons summarized below.

Independent Claims 1 and 14

Claim 1 recites a kitchen ventilation system comprising a sensor for detecting a chemical composition over an active zone of a cooktop and an air moving device for displacing air including the chemical composition. The kitchen ventilation system comprises an air flow direction control device for directing air displaced by the air moving device between exhaust and recirculation flow paths and control circuitry coupled to the sensor, to the air moving device and to the air flow direction control device for

regulating operation of the air moving device and a position of the air flow direction control device based upon signals from the sensor.

Amended claim 14 recites a method for ventilating air over an active side of a cooktop comprising detecting a chemical composition over a cooktop on which cooking is performed through a sensor and controlling an air moving device for displacing air from the cooktop and an air flow direction control device for directing air displaced by the air moving device between exhaust and recirculation flow paths based upon the sensed chemical composition over the cooktop.

Applicants thus submit that independent claims 1 and 14 recite, in generally similar language, detecting a chemical composition over an active zone of a cooktop and controlling the operation of an air moving device and air flow direction control device based upon the sensed chemical composition over the cooktop.

The Examiner argued that Melink discloses a sensor for detecting smoke and combustion products, an air moving device and control circuitry coupled to the sensor and the air moving device for regulating operation of the air moving device. The Examiner cited passages at col. 5, lines 66-67 and col. 6 lines 27-31 in support of the rejection. The Examiner admitted that Melink does not discuss operating in either recirculation or exhaust mode utilizing an air flow direction control device connected to a controller.

The Examiner relied upon Bowen to teach an adjustable damper that is movable between an exhaust and a recirculation position. However, the Examiner admitted that Bowen does not suggest that the damper is automatically controlled, and relied upon Morton to teach an air flow direction control device for directing the air between exhaust and recirculation pathways based upon signals from a temperature sensor. The Examiner cited passages at col. 2, lines 36-40 and col. 3 lines 47-49 in support of the rejection.

Applicants submit that the cited references, taken alone or in hypothetical combination, fail to teach or suggest control of the air flow direction control device based upon a *sensed chemical composition over the cooktop*, as recited by independent claims 1, and 14. Melink teaches a kitchen exhaust system that is adapted to exhaust air at a plurality of volume rates to improve the comfort, health and safety conditions in a kitchen. Melink fails to disclose an air flow direction control device for directing air displaced by the air moving device between exhaust and recirculation flow paths and control of such air flow direction control device *based upon the sensed chemical composition* over the cooktop.

Bowen teaches a kitchen stove hood having two venting modes of operation through an adjustable damper. However, Bowen fails to teach automatic control of the damper based upon a sensed chemical composition over the cooktop. Morton teaches a multi-position damper located within a hood structure of a kitchen ventilator and control of energization of a damper based upon a sensed temperature of the hood structure. Applicants submit that Morton does not teach control of an air moving device and an air flow direction control device based upon a sensed chemical composition. In view of these deficiencies, among others, the cited references, taken alone or in hypothetical combination, cannot render obvious the current independent claims 1 and 14 and their dependent claims.

Independent Claim 22

Independent claim 22 recites a kitchen ventilation system comprising a sensor for detecting an operating parameter of a cooktop and an air moving device for displacing air from the cooktop. The kitchen ventilation system comprises an air flow direction control device for directing air displaced by the air moving device between exhaust and recirculation flow paths and control circuitry coupled to the sensor, to the air moving device and to the air flow direction control device for regulating operation of the air moving device and a position of the air flow direction control device based upon signals

from the sensor, wherein operation of the control circuitry is configurable based upon site-specific factors of a site in which the ventilation system is installed.

As noted above, independent claim 22 recites operation of the control circuitry being configurable based upon site-specific factors of a site in which the ventilation system is installed. The Examiner argued that Melink discloses that the controller is configurable by the user, which is read as meeting the claimed limitation “configurable based on installation location.

Applicants submit that Melink teaches an interface that may include input switches to input control data or select from menu options. However, Melink does not specify such input control data being data related to site-specific factors. In particular, Melink does not teach control of the operation of the air moving device and a position if the air flow direction control device based upon site-specific factors such as a hood width, site dimensions, installation location, height above the cooktop and type of fuel through the control circuitry.

Therefore, Applicants submit that independent claim 22 and its dependent claims are allowable and respectfully request the Examiner to reconsider rejection of the claim.

Independent Claim 35

Independent claim 35 recites a kitchen ventilation system comprising a sensor for detecting an operating parameter of a cooktop, an air displacement system including an air moving device for displacing air from the cooktop, and an air flow direction control device for directing air displaced by the air moving device between exhaust and recirculation flow paths and control circuitry coupled to the sensor and to the air displacement system for *regulating operation of the air displacement system* based upon signals from the sensor and upon characteristics of the air displacement system *to reduce acoustic noise of the ventilation system during operation*.

The Examiner argued that Melink apparatus has the claimed structure and is disclosed as reducing acoustic noise by varying the fan speed. Applicants submit that Melink does not teach regulating operation of the *air displacement system* based upon signals from the sensor and upon characteristics of the air displacement system to reduce the acoustic noise of the ventilation system.

As noted above, Melink does not teach operating in either recirculation or exhaust mode utilizing an *air flow direction control device* connected to a controller. Further, Melink does not teach control of such device for reducing acoustic noise based upon signals from the sensor and characteristics of such device. Rather, Melink discloses increasing or decreasing volume rate of exhaust to avoid sudden cycling of the motor and/or unsettling variations in noise or air flow.

Therefore, Applicants submit that independent claim 35 and its dependent claims are allowable and respectfully request the Examiner to reconsider rejection of the claim.

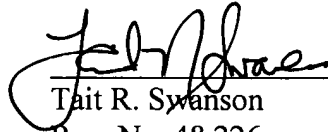
Claims 8, 9, 11-13, 21, 29, 30 and 32-34 depend from independent claims 1, 14, and 22 respectively. Applicants respectfully submit that inasmuch as independent claims 1, 14 and 22 are allowable, these claims are allowable at least by virtue of their dependence from an allowable base claim.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: Feb. 20, 2007



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